

Kunkai Lin

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🎓 EDUCATION

University of California, Berkeley

Sep 2019 - May 2023

B.A. in Computer Science

Berkeley, CA

- Major GPA: 3.71/4.00
- Relevant Coursework: Operating Systems, Database Systems, Efficient Algorithms, Data Structures, Machine Structures, Computer Security, Optimization Models, Machine Learning, Artificial Intelligence, Computational Photography

🔧 TECHNICAL SKILLS

Languages: Java, Python, C, Golang, HTML, CSS, RISC-V

Libraries/Frameworks/Tools: NumPy, Sqlite, Scikit-learn, Opencv, Pandas, Django, Git

💼 EXPERIENCE

ByteDance

Jun 2021 - Aug 2021

Front-End Development Intern

Beijing

- Helped build and improve a website for China PA Department used for recording the usage of meeting rooms
- Used CSS to improve the website appearance and used Django to add some logics to deal with the information of meeting rooms from database and render the website

UC Berkeley Department of EECS

Aug 2022 - Present

CS 162 Course Staff

Berkeley, CA

- Fall 2022 CS 162 Reader, Operating Systems and System Programming, Prof. Natacha Crooks
- Graded student works, held the midterm review sessions and answered conceptual questions related to course materials during weekly office hours

📁 PROJECTS

Pintos Operating System (C)

Feb 2022 - May 2022

- Designed an x86 instruction set based OS kernel to simulate the real operating system and enforced user and kernel level synchronization with semaphores, lock and condition variables to prevent race conditions
- Facilitated user program with argument passing, process control syscalls, floating point operations and file systems following Berkeley Fast File System (FFS) structure
- Implemented functionalities to support the C pthread API and strict priority scheduling that allows priority donation for multi-threading

End-to-End File Sharing System (Golang)

Jul 2021 - Aug 2021

- Applied the cryptographic primitives, including AES, HMAC, digital signatures and RSA, to design and implemented the client application for a secure file sharing system, and ensured data confidentiality, integrity and authenticity
- The system's functions included: Authenticate with a username and password; Save files to the server; Load saved files from the server; Overwrite saved files on the server; Append to saved files on the server; Share saved files with other users; and Revoke access to previously shared files

Bear Maps (Java)

Oct 2020 - Nov 2020

- Implemented the back end for a web-based routing application (the mapping and routing of Berkeley) inspired by Google Maps by using existing front end and OpenStreetMap mapping data
- Developed map rastering and routing, applied the A* algorithm with the graph representation to implement shortest path routing